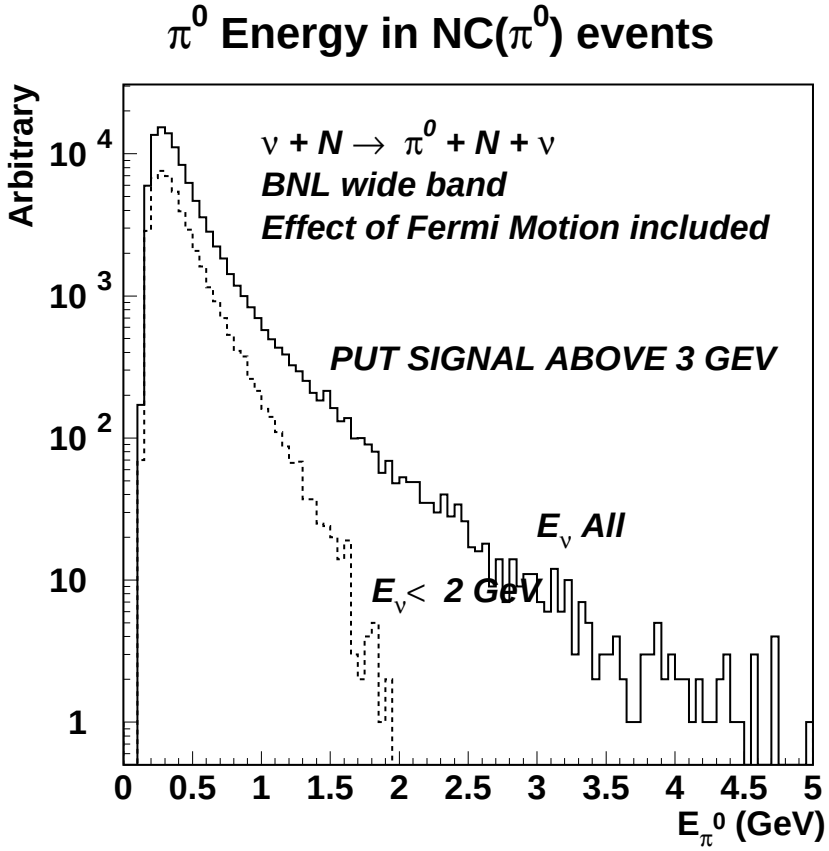
NC π^0 background for $\nu_\mu \rightarrow \nu_e$



- The NC energy distribution is independent of ν-energy except the kinematic limit.
- In $\nu_\mu N \rightarrow \nu_\mu N \pi^0$ events all energy ν produce peak at the same energy except the tail.
- For a very long baselines and wide band beam ν_e signal will be above 3 GeV with little π^0 background.